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ABSTRACT

Individually Guided Education (IGE) is an alternative to the traditional age-graded form of elementary schooling. In a typical IGE school, the principal shares her/his authority with leaders of units in decision-making domains and reaches decision by consensus. The leader of a unit in turn shares his/her authority with unit teachers in making decisions. The purpose of this study was to explore the change process and change contents in the phases of mobilization, implementation, and institutionalization of IGE. Because of the entrenchment of the present-day graded system, implementation of IGE is rarely done as originally intended because of the different educational backgrounds, conceptions, and traditional forms and practices held by teachers and students. Reformers need to expect that any original plan will be interpreted, modified, and used in accordance with the professional cultures and ideologies extant within and asserted through institutions. To increase the possibility of institutionalizing a large reform program like IGE, staff teachers need to be involved in the decision-making process; administrators need to be aware of teachers' attitudes toward change; and adequate facilities, materials, and financial assistance need to be arranged for. Once institutionalized, IGE should receive follow-up support. (Contains 54 references.) (RT)

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The Rise and Fall of Individually Guided Education, 1969-1979

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INTRODUCTION

The developers of Individually Guided Education (IGE) at the Wisconsin Research and Development Center, the University of Wisconsin-Madison and the Institute for the Development of Educational Activities, Inc. (/I/D/E/A/), an educational affiliate of the Charles F. Kettering Foundation, designed the program as an alternative to the traditional age-graded, self-contained form of elementary schooling. In a typical IGE (multi-unit) school, according to Klausmeier et al. (1977), the principal shares his/her authority with leaders of units in making decisions on managerial and technical domains and reaches decisions by consensus rather than unilaterally. The leader of a unit shares his/her authority with unit teachers in making decisions on such unit matters as planning, grouping, instructing, grading, and reporting to parents; then unit teachers carry out and evaluate instructional programs cooperatively. Following the design of an IGE school, students in multi-aged (e.g., ages 6-8) units learn in various groups ranging from the whole unit meeting, to large group, medium group, small group, and one-to-one. Students progress based on their achievement, not based on their age or grade. Building facilities are modified to meet these organizational and instructional needs. Finally, a group of IGE schools builds a network so that IGE practitioners share ideas, materials, and instructional approaches (Klausmeier et al., 1977).

In 1967-68, the first seven multi-unit elementary schools were created in Wisconsin and were found successful in generating higher student achievement and positive student attitudes toward the school (Klausmeier et al., 1968). In 1968-69, the Wisconsin Department of Public Instruction evaluated the multi-unit concept for its potential for enhancing educational opportunities for students and selected the concept

for statewide adoption, installation and maintenance. This involvement of the Wisconsin State Department helped to increase the number of the multi-unit schools in Wisconsin to 99 by the school year 1970-71. Additionally, a total of 65 multi-unit schools were established in seven other states by 1970-71 (Kalusmeier et al., 1971a). After witnessing a dramatic increase in the number of IGE schools, the developers at the Center proposed the multi-unit concept for nationwide dissemination to the U.S. Office of Education which accepted the proposal and granted financial support for the nationwide installation of IGE in 1971 (Klausmeier et al., 1971b).

During the large-scale installation period from 1971 to 1975, the developers at the Wisconsin R&D Center (and /I/D/E/A/)[1] engaged in massive implementation efforts, providing financial/technical assistance, leadership development workshops, and teacher training programs to State/Regional IGE Coordinating Councils, teacher education institutions, intermediate education agencies, district and school policymakers, administrators, and practitioners (Walter et al., 1975). Thanks to these efforts, combined with the financial support of almost thirty million dollars from three government agencies and two foundations, at least 3,000 schools were implementing IGE in forty states at the peak of this movement in 1976-77 (Parker, 1977). Towards the late 1970s, however, IGE faded in prominence, according to the major developer of IGE, due largely to the withdrawal of federal support, the cessation of the Center's curricular and inservice materials development, ill-functioning state IGE networks, a nationwide property tax

[1] After developing its own version of IGE (or 35 goals/outcomes for IGE model), the Institute for the Development of Educational Activities, Inc. (/I/D/E/A/), an educational affiliate of the Charles F. Kettering Foundation, joined the Wisconsin Center in publishing inservice materials from 1969 to 1972. However, the difference between these two parties in the policy of using inservice materials led to /I/D/E/A/ engaging in IGE implementation efforts independently.

revolt started in the mid-1970s, and a "back-to-the-basics" movement that spread across the country (Klausmeier, 1992). In addition, Romberg's (1985) evaluation study sponsored by the Wisconsin Center between 1976 and 1978 revealed that only about 23% of 159 schools (selected through a stratified random sampling from 946 schools) had reorganized their staffs by forming units, exhibited shared decision making, and made efforts to change the pattern of instruction in their schools. Thus, the majority of IGE schools either failed to make the substantial organizational and instructional changes which reflect IGE (60% of 159) or tried to follow the multi-unit school model but encountered serious problems (13% of 159) (Romberg, 1985).

THEORETICAL FRAMEWORK

The history of the twentieth-century American school reform bestowed on us a valuable lesson that a new school reform program is subject to modification and can be used to legitimize, rather than change, what is called "the grammar of schooling," i.e., established institutional patterns (Berman & McLaughlin, 1978; Elmore, 1996; Sarason, 1982/1996; Tyack & Cuban,1995; Tyack & Tobin, 1994). Among others, Tyack and Cuban (1995) note that the grammar of schooling is the result of previous reforms that had, and continue to have a strong foundation in the social expectations about schooling held both by educators and by the general public. Together with this notion of "the grammar of schooling," the notion of "loose coupling" provides an organizational perspective on "curriculum stability and change" in American education during the 20th century (Cuban, 1992; Meyer and Rowan, 1977, 1978; Weick, 1976).

The organizational characteristics of American public schools have been shaped largely by tax-supported public bureaucracy governed by lay policy-makers (Cuban,

1992). To be seen as worthy of continued support, school districts often adopt innovations. At the same time, responsible for maintaining order, instructing the pupils, and producing students who have "learned," the district has a bureaucracy to coordinate and control what happens in classrooms and elsewhere by, for example, making certain that staff meet state and local standards for employment and that schools meet legal requirements for using state and federal money (Cuban, 1992; Elmore and McLaughlin, 1988; Meyer and Rowan, 1977, 1978).

The tight coupling loosens significantly when it comes to classroom instruction that is typified as a blend of art and science subject to improvisation and unpredictability in outcomes. Teachers have developed a practical pedagogy to deal with the distinctive nature of the classroom and its requirements that is often not scrutinized by either district administrators or policymakers (Bidwell, 1965; Cuban, 1992; Meyer and Rowan, 1978). The decoupling of instruction from administration and policy making attains autonomy and separation that teachers find enjoyable. Cuban (1993) contends that there are limits, of course, on how much and how far teachers can alter what happens in the classroom: choice is situationally constrained. The fringe of freedom that teachers take pleasure in within the limits of their "situationally constrained choice" may be small, but it has made teachers gatekeepers for any pedagogical reforms (Cuban, 1993). Thus, major school reform efforts to change classroom teaching often ended up with modest alterations in pedagogy in elementary and high schools over the past century (Cuban, 1993).

In an effort to understand how educational change works in practice, a group of scholars have conducted research on the process of curriculum implementation since the 1960s. There have been three different approaches to curriculum

implementation: fidelity, mutual adaptation, and enactment (Snyder et al., 1992). The first approach's "main intent is to determine the degree of implementation of an innovation in terms of the extent to which actual use of the innovation corresponds to intended or planned use and to determine factors which facilitate and inhibit such implementation" (Fullan & Pomfret, 1977, p. 340). Researchers with the second orientation (Berman & McLaughlin, 1978; McLaughlin, 1976) are interested in studying how the innovation is adapted during the implementation process rather than in measuring the degree to which the innovation is implemented as planned. In the third approach, the focus shifts to how curriculum is shaped through the evolving constructs of teachers and students.

Studies that have examined curriculum implementation have provided us with a great deal of information about factors which support and inhibit implementation. Fullan (1982) identified factors which influence implementation, listing "all those factors on which there is sufficient evidence to warrant generalizing about how and why the particular factor influences implementation" (p. 55). Many factors were related to characteristics of the change: need and relevance of the change, clarity, complexity, and quality and practicality of program. In addition, Fullan identified a number of local characteristics that are related to: district, community, principal, and teachers as well as such external factors as government and other agencies (1991, p. 68).

Moreover, Fullan (1991) listed factors affecting initiation and continuation of a change program. He included eight variables influencing whether a change gets started: existence and quality of innovations, access to information, advocacy from central administration, teacher advocacy, external change agents, community pressure/support/

apathy, new policy-funds (federal/state/local), and problem-solving and bureaucratic orientations (1991, p. 50). Further, Fullan (1991) summarized the factors affecting continuation as active principal leadership, staff development, and district support (pp. 88-89).

FRAME OF REFERENCE

As Fullan (1991) notes, educational change involves two main aspects: what changes to implement (theories of education) and how to implement them (theories of change). The former is related to the values, goals, contents and the consequences associated with specific educational changes, while the latter is related to the dynamics of educational change as a sociopolitical process involving all kinds of individual, classroom, school, local, regional, and national factors at work in interactive ways (Fullan, 1991, p. 5). While keeping in mind that the what and how constantly interact and reshape each other, this study describes not only those factors related to the process of change for IGE, but also how and the degree to which the contents of the IGE model were implemented.

In relation to the *change process for IGE*, I rely on both the fidelity and mutual adaptation perspectives as they relate to the study of Individually Guided Education. While I draw on both perspectives in order to identify factors that supported and inhibited IGE implementation, I pay more attention to the mutual adaptation perspective than the fidelity perspective when the factors are related to the adaptation and modification occurring in IGE schools. In addition, I situate these factors in the three phases of change processes that IGE schools underwent: mobilization, implementation, and institutionalization (Berman & McLaughlin, 1978).

In relation to the *change contents of IGE*, I rely on the notion of "grammar of schooling" offered by Tyack and Cuban (1995), given that IGE was aimed at replacing the age-graded, self-contained classroom. Tyack and Cuban maintained that the grammar of schooling – age-graded, self-contained classroom, and curriculum divided into subject areas – persisted despite determined efforts to replace it over the 20th century. This notion helps to provide explanations for the disparity between the number of schools that adopted IGE and the number of schools that actually implemented IGE. When I refer to the grammar of schooling in my study, I mean age-graded, self-contained classrooms only. Further, relying on both the fidelity and mutual adaptation perspectives, I describe the degree to which and how the change contents of IGE were implemented in four different types of IGE schools categorized by their degree of implementation: opportunistic, nominal, marginal, and true IGE schools.

THE PURPOSE AND SCOPE OF STUDY

The purpose of this study was to explore both the change processes and change contents in the phases of mobilization, implementation, and institutionalization of the Multi-unit School Organization (MUSE) and the Instructional Programming Model (IPM) – two of seven components of the IGE system – aimed at replacing the age-graded, self-contained classroom, 1969-1979. In fulfilling this purpose, the unit of analysis is the school building where the principal and staff were engaged in changeover to IGE. Specifically, the following questions are investigated:

1. What factors influenced the degree and processes of adoption, implementation and continuation of the IGE reform program?
2. How and to what degree were the specific organizational and instructional

arrangements of MUSE and IPM adopted, implemented, and continued by school personnel nationwide?

The scope of this study is constrained by its focus: the core of schooling, or organizational regularities, structures, rules, and practices that organize the work of instruction and teaching practices at the classroom level. Due to this focus on organizational and related instructional arrangements (the grammar of schooling), attention is paid to two major components of the IGE system: the MUSE and the IPM. Three other components of the IGE system – compatible curriculum materials, evaluation for decision making, and the facilitative environments – are mildly dealt with, while the other two components of the IGE system – Home-School-Community relations, and continuing research and development – will be considered the least.

In addition, this study omits the history of /I/D/E/A/ in the IGE movement in part because of the focus of study and in part because of the limited data related to the involvement of /I/D/E/A/ in the IGE movement. Also, focusing on the nationwide mobilization, implementation, and institutionalization of MUSE/IPM in the United States, 1969-1979, this research does not deal with the implementation and institutionalization of MUSE/IPM during the period after 1980, nor IGE abroad.

THE PROGRAM: THE MULTIUNIT SCHOOL ORGANIZATION AND THE INSTRUCTIONAL PROGRAMMING MODEL

The following description is focused on the program developed by the Wisconsin R&D Center.[2] Specifically, the following condensation of the two components of IGE is largely derived from Individually Guided Education and the Multiunit Elementary School

[2] /I/D/E/A/'s version of IGE also had seven major components or Outcome Clusters as they were called: School Decisions, Unit Organization, Unit Planning and Improvement, The Learning Program, Student Responsibilities, Relationships, and Adoption & Implementation (Fleury, 1993, pp. 218-220).

by Klausmeier, Quilling, Sorenson, Way, and Glasrud, (1971b, pp. 15-30) as well as Walter et al. (1975).

The Multi-unit School Elementary (MUSE)

The MUSE was designed to provide an environment in which instructional programming and the other components of IGE could be introduced and refined. It was a creation of organizational arrangements that had evolved since 1965 from a synthesis of theory and practice concerning "instructional programming for the individual students, horizontal and vertical organization for instruction, role differentiation, shared decision-making by groups, open communication, and administrative and instructional accountability" (Klausmeier et al., 1971b, p. 20).

Figure 1.1 shows the prototype organization of a MUSE of 400-600 students. Variations from the prototype would be made in view of the number of enrolled students in the building, the availability of noncertified personnel, the size of the school district, and so on. The organizational structure would consist of interrelated parties at three different levels of operation: the I&R unit[3] at the classroom level, the IIC at the building level, and the SPC or a comparable administrative organization at the district level. Each of the first two levels would be itself a hierarchical arrangement with unequivocally defined roles for personnel. Personnel serving at each of two levels would provide the

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[3] List of IGE Acronyms

IGE Organizational and Instructional Acronyms

I & R	Instruction and Research Unit (classroom level)
IIC	Instructional Improvement Committee (school building level)
IPM	Instructional Programming Model
MUS	Multiunit School Organization
SPC	Systemwide Program Committee (school district level)

IGE Curriculum Acronyms

DMP	Developing Mathematical Processes
PRS	Pre-Reading Skills Program
WDRSD	Wisconsin Design for Reading Skill Development

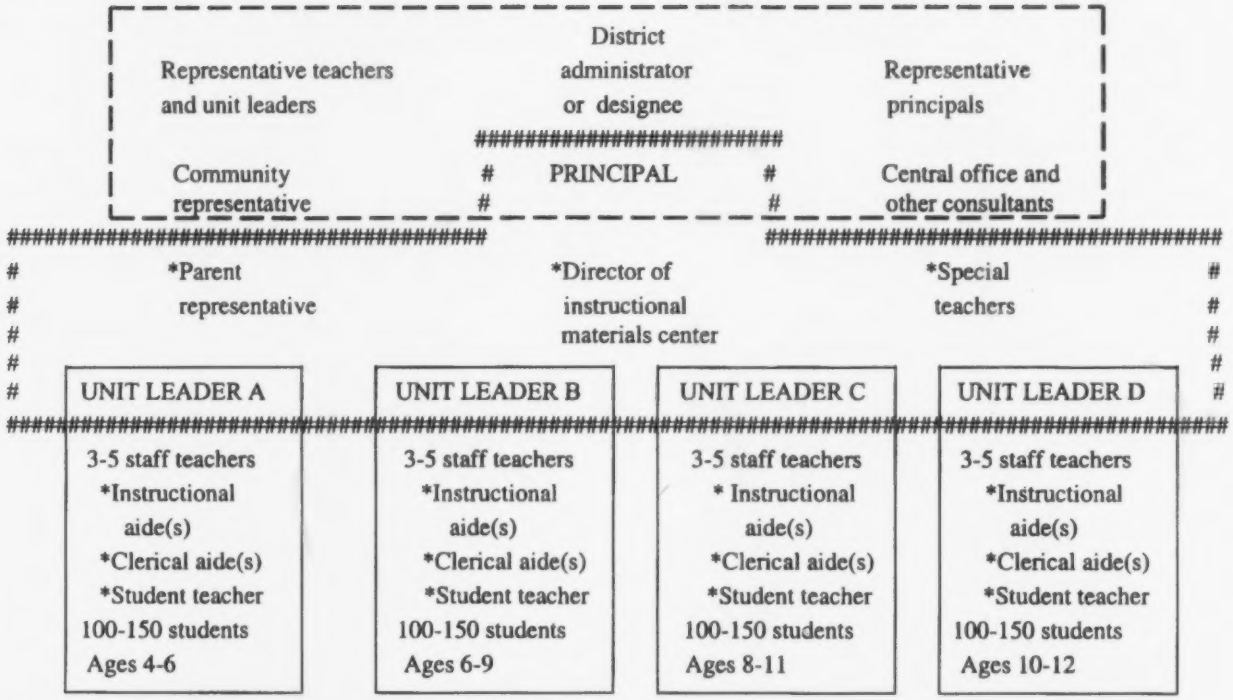

Figure 1.1. The Multiunit Organization

Source: from Individually Guided Elementary Education: Concepts and Practices, by H. J. Klausmeier, R. A. Rossmiller, & M. Saily (Eds.) (p. 12), 1977, New York: Academic Press.

———— Instruction and Research Unit;

########## Instructional Improvement Committee;

— — — — Systemwide Program Committee.

*Inclusion of these persons will vary according to particular school settings.

communication link (Klausmeier et al., 1971b, p. 20). At the classroom level in the MUSE, one would find the non-graded Instruction and Research (I&R) unit that replaced the age-graded, self-contained classroom. A typical I&R unit would include the following personnel: "a unit leader, two or three staff teachers, a first-year teacher or resident teacher, an instructional secretary, an intern, and 100-150 students" (Klausmeier et al., 1971b, p. 8). The major functions of the I&R unit would be: "(1) to plan, carry out, and evaluate instructional programs for each student in the unit; (2) to engage in continuous inservice staff development activities; (3) to provide preservice teacher education activities; and (4) to plan and conduct cooperatively, often with other agencies, a systematic program of research and development" (Klausmeier et al., 1971b, p. 22; Walter et al., 1975, p. 8).

At the second organizational level, the building level, would be the Instructional Improvement Committee (IIC). The IIC would consist of the principal and the unit leaders (Klausmeier et al., 1971b, p. 22). The four major functions of the IIC would be: "(1) stating the general educational objectives and outlining the educational program for the entire school building; (2) interpreting and implementing system-wide and statewide policies that affect the educational program of the building; (3) coordinating the activities of the I&R units to achieve continuity in all curricular areas; and (4) arranging for the use of the time, facilities, and resources that are not managed independently by the units" (Klausmeier et al., 1971b, p. 22; Walter et al., 1975, p. 8). The IIC, thus, would deal typically with planning and coordinating functions related to instruction (Klausmeier et al., 1971b, p. 22).

The System-wide Program Committee (SPC) would be at the third or system level

of the organizational structure. The SPC was developed to expedite the transition from the age-graded, self-contained organization to the organizations of the I&R unit and the IIC. The SPC would be chaired by the school superintendent or his designee and involve consultants and other central office staff, representative principals, unit leaders, and teachers (Klausmeier et al., 1971b, p. 22).

The four decision-making and facilitative responsibilities for which the SPC takes initiative would be: "(1) identifying the functions to be performed in each MUSE of the district; (2) recruiting personnel for each MUSE and arranging for their inservice education; (3) providing instructional materials; and (4) disseminating relevant information within the district and community" (Klausmeier et al., 1971b, p. 22; Walter et al., 1975, p. 8). A central office organization other than an SPC might be responsible for these functions; and considerable flexibility would be required, since local school districts varied greatly in size and other characteristics (Klausmeier et al., 1971b, p. 22).

The Instructional Programming Model (IPM)

At the center of the IGE system is the Instructional Programming Model (IPM) for the individual student. This model takes into consideration "the beginning level of performance, rate of progress, style of learning, motivational level, and other characteristics of each pupil in the context of the educational program of the school" (Walter et al., 1975, p. 8). Instructional programming for the individual student should be properly planned and implemented in the cognitive, psychomotor, and affective realms. It could be used either with categorically stated instructional objectives that enumerate mastery, or with emphatic and broad objectives that imply activities to be completed or progress to be made. The model displayed in Figure 1.2 was also utilized by R&D Center

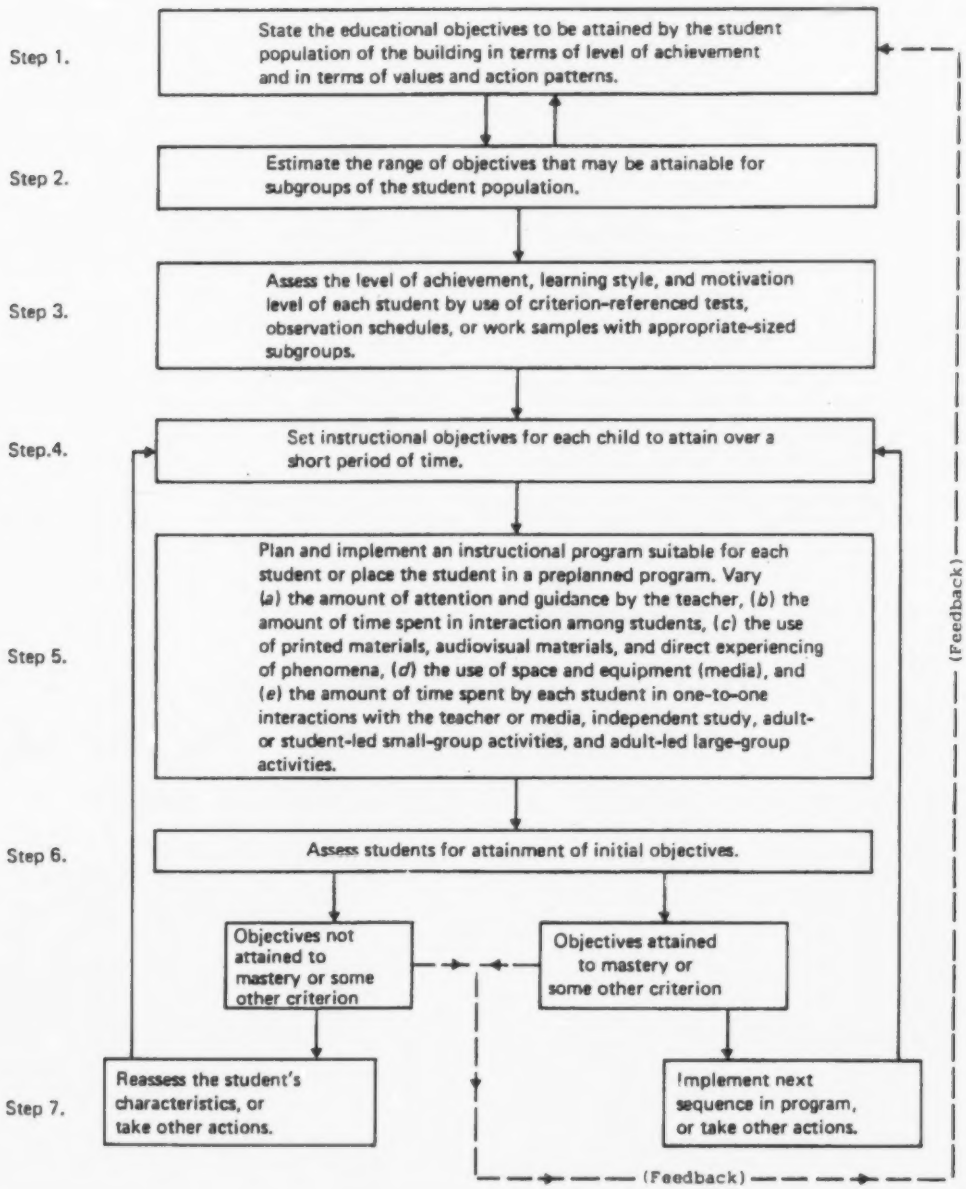
Step 1.
State the educational objectives to be attained by the student population of the building in terms of level of achievement and in terms of values and action patterns.
Step 2.
Estimate the range of objectives that may be attainable for subgroups of the student population.
Step 3.
Assess the level of achievement, learning style, and motivation level of each student by use of criterion-referenced tests, observation schedules, or work samples with appropriate-sized subgroups.
Step.4.
Set instructional objectives for each child to attain over a short period of time.
Step 5.
Plan and implement an instructional program suitable for each student or place the student in a preplanned program. Vary (a) the amount of attention and guidance by the teacher, (b) the amount of time spent in interaction among students, (c) the use of printed materials, audiovisual materials, and direct experiencing of phenomena, (d) the use of space and equipment (media), and (e) the amount of time spent by each student in one-to-one interactions with the teacher or media, independent study, adult- or student-led small-group activities, and adult-led large-group activities.
Step 6.
Assess students for attainment of initial objectives.
Objectives not attained to mastery or some other criterion
Objectives attained to mastery or some other criterion
Step 7.
Reassess the student's characteristics, or take other actions.
Implement next sequence in program, or take other actions.
(Feedback)
(Feedback)

Figure 1.2. Instructional Programming Model in IGE
Source: from Individually Guided Elementary Education: Concepts and Practices, by H. J. Klausmeier, R. A. Rossmiller, M. Saily (Eds.) (p. 16), 1977, New York: Academic Press.

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teams in developing curriculum materials and by school staff in implementing IGE. Until 1971, it had been implemented most broadly in schools that had utilized the Word Attack component of the Wisconsin Design for Reading Skill Development (Klausmeier et al., 1971b, p. 17, 25; Walter et al., 1975, pp. 8-10).

DATA COLLECTION AND ANALYSIS

To collect historical documents for IGE, I have used the Penn State University libraries and have visited the archives at the Wisconsin Research and Development Center. The following are major primary source materials among those that I have obtained to date: records and reports of the United States Office of Education, the National Institute of Education, and state departments of education; Quarterly/Semi-annual/Annual Progress Reports on the Center, Project Plan and Budget Requests, Memoranda of Agreement with States, agendas for leadership development conferences and workshops, Theoretical/ Technical Reports, Working Papers, the five-phase evaluation reports, manuals for IGE implementation, IGE inservice training materials, and curricular materials published at the Center; memoranda within and correspondence between the Center and other agencies; lists of inservice/preservice IGE courses; evaluation reports on nationwide installation of IGE by the Educational Testing Service; newsletters by the Center; documents by superintendents, principals, and school boards; more than 120 doctoral dissertations at 37 colleges and universities in 23 states; and ERIC documents. Included also in primary sources are written interviews with IGE creators. Secondary data and documents that I employed selectively when necessary include books, journal articles, newspaper articles, transcripts from radio programs, and other materials regarding IGE program development and implementation.

To all gathered data and documents I applied external and internal criticisms in order to derive historical evidence. External criticism determines the authenticity of the source while internal criticism determines the credibility of the facts stated by the source (McMillan and Schumacher, 2001). With the help of numerous faculty from several departments and colleges at the Penn State University, I ascertained the facts, asked interpretative questions about how these historical events occurred and their reasons, and moved to stating generalizations. In investigating and analyzing the past events around the IGE reform movement, the writer was interested not only in explaining IGE as an education reform, but also in explaining it as unique and different from other education reforms.

Also, relying on naturalistic modes of data analysis, I first read and reread the data to get a sense of their scope and to check for emerging themes or patterns. This activity was accompanied by copious note-taking, in which my observations, hunches, and ideas were captured. This step led to the development of categories that could be applied as an organizing scheme to the data. The next step was "unitizing" the data, i.e., dividing them into the smallest pieces of information about something that could stand by itself. Then, the categories were applied to the segments of data, which is called coding. Meanwhile, the organizing system was refined: the categories were renamed, modified in content, subdivided, discarded, or supplemented by new ones. Then, the final application of the categories to the data segments followed to seek configuration describing their content and linkages across categories. These linkages led to final interpretations of the history of IGE reform efforts, 1969-1979.

RESULTS

The Process of Change and Key Factors

Within the history of IGE, several different key factors either facilitated or hindered the processes of mobilizing, implementing, and institutionalizing IGE as summarized in Table 1.1. Each factor within each phase helps to explain the degrees and processes of innovation in different types of schools: opportunistic, nominal, marginal, and true IGE schools.

Table 1.1. Key Factors in the Phases of IGE Innovation

Phase	Key Factors
Mobilization	Locus of decision, need for a change, readiness, and resources
Implementation	Staff development, role relationship change, and district support
Institutionalization	External support, creative modification, and continued inservice

The Phase of Mobilization

In the history of IGE, four factors played a major role in the adoption phase in relation to the eventual implementation of MUSE/IPM: locus of decision, need for a change, readiness, and resources. According to the data, the first factor, "locus of decision," had more to do with the district administration that made the decision on the adoption of MUSE/IPM than grass-roots staff. This top-down nature of decision making in the majority of school districts that adopted IGE was related to the fact that the major impetus for IGE adoption came from a federal government agency, i.e., the United States Office of Education (USOE). After the USOE awarded the Wisconsin R&D Center a grant to accomplish four phases of the nationwide installation effort, the Center established subcontractual relationships with state education agencies in nine states in

1971 to start 20-50 MUSE/IPM schools. In turn, state education agencies made a contract with school districts; and in turn, the central office administration, either alone or with a principal, made a decision to transform a traditional school into an IGE school.

Thus, after the political decision to select IGE for nationwide dissemination was taken, the focus of the grantee was on obtaining as many adoptions as planned for in as short a time as possible. As a result, the decision to adopt IGE was more or less beyond the control of the staff in the majority of IGE schools. The staff of only a small number of schools who perceived a need for an innovation participated in the IGE adoption decision and appeared committed to the initiating process. Due to this politicized mobilization, IGE was adopted for symbolic or opportunistic reasons in a number of schools. Although hard to determine, it was estimated that between 62 and 87 (22% to 30%) of 287 IGE schools fell into this category (opportunistic schools) because these schools were known to have adopted IGE, but did not implement MUSE/IPM at all (Ironside, 1972, p. 14).[1]

Unlike many other federally funded programs that paid less attention to the phase of implementation, however, several types of training opportunities for the implementation of MUSE/IPM were sponsored by the Wisconsin R&D Center, state education agencies, teacher education institutions, and school districts during 1971-72. These opportunities included: the train chain (national overview, state conference, local commitment, school leader training, and local staff training), specific workshops and institutes, and activities that schools, districts, or Leagues arranged. These extensive training opportunities provided reform-minded schools with the basis for mobilizing

[1] Thus, this group of schools will not be described in the phases of implementation and continuation. Also, note that the total number of IGE schools cited will be reduced from 287 to 200 in the phase of implementation.

people and resources toward the implementation of MUSE/IPM.

The remaining three mobilizing factors – "need for a change," "readiness," and "resources" – pertained more to the staff at the building level than those at the central office. The staff in IGE schools that would either co-opt or discontinue MUSE/IPM during implementation or institutionalization had not been looking for an alternative to traditional education. Further, most of the staff were not involved in the decision to adopt IGE since the decision was made at a higher level. Not surprisingly, feeling no need for change, the staff was uninterested in training opportunities for the initiation of IGE. Moreover, the unsuccessful IGE schools acquired few IGE materials, had inadequate facilities for or did not utilize facilities in tune with IGE, and rarely called upon external support resources for initiation training. Based on several sources (Barrows, Klenke, & Heffernan, 1979; Ironside, 1972; Ironside & Conaway, 1979; Goodridge, 1975; Lacy, 1972), more than 40% of 287 schools fell into this category. A school in this category would be called a "nominal" IGE school[2] in the phases of implementation and continuation (Romberg, 1985).

The staff of another group of IGE schools that would either co-opt or discontinue MUSE/IPM during implementation or institutionalization was similar to the above group of IGE schools. They had not been looking for an alternative to traditional education and were not involved in the decision to adopt IGE since the decision was made administratively. Unlike the staff of the above nominal IGE schools, however, at least

[2] An evaluation study conducted in 1977 by the Wisconsin R&D Center classified a total of 159 IGE schools into three groups by the degree of implementation of IGE: nominal, marginal, and true IGE schools. The evaluation team found that nominal IGE schools (60% of 159) seemingly liked some of the ideas about IGE and wanted to be identified with the concepts, but failed to make the substantial organizational and instructional changes which reflect IGE (Romberg, 1985, p. 72).

part of the staff of this group became interested in IGE because of the opportunities they saw for students. Frequently encouraged by the principal and supported by the central office, these schools acquired IGE materials, sometimes transformed traditional facilities into those in tune with IGE, called upon external support resources for initiation training, cooperated with team members in initiating MUSE/IPM, and incorporated some elements of MUSE/IPM into their curriculum and teaching practices. However, less than 20% of 287 schools fell into this category (Barrows, Klenke, & Heffernan, 1979; Iornside, 1972; Ironside & Conaway, 1979; Goodridge, 1975; Lacy, 1972). A school in this category would be called a "marginal" IGE school[3] in the phases of implementation and continuation (Romberg, 1985).

In contrast to the above characterizations, a majority of the staff in IGE schools that would successfully implement and institutionalize MUSE/IPM had been looking for an alternative to traditional education, made a joint decision to initiate IGE, and often displayed a willingness to work extra hours and cooperatively in adopting the program (Ironside & Conaway, 1979, p. 42). In these schools, the adoption decision was shared by the principal and staff; they accumulated IGE materials; they arranged for open space and had a library/IMC[4] available for the purpose of IGE-related instruction; and they called on such opportunities as consultants, site visits, and several types of training for initiation. According to the research (Barrows, Klenke, & Heffernan, 1979; Ironside, 1972; Ironside & Conaway, 1979; Goodridge, 1975; Lacy, 1972), less than 20% of 287

[3] The same evaluation study mentioned in footnote 2 found that marginal IGE schools (20% of 159) were reorganizing their staffs by forming units, sharing decision making, and making efforts to change the pattern of instruction in their schools, but encountered several problems in forming units, setting objectives, obtaining district/parental support, and so forth; they were not yet IGE but they were no longer a traditional school. A low marginal IGE school was characterized by a less degree of implementation than a high marginal IGE school (Romberg, 1985, pp. 71-72).

[4] Instructional Materials Center (IMC).

schools fell into this category. A school in this category would be called a "true or actual" IGE school[5] in the phases of implementation and continuation (Romberg, 1985).

The Phase of Implementation

Three key factors facilitated or hindered the processes of implementing MUSE/IPM in successful and less successful IGE schools: staff development, role relationship change, and district support.

Staff Development. The principal and unit leaders of a nominal IGE school attended a state-sponsored formal staff development workshop in 1971. The principal and unit leaders also participated in a few League activities; however, there were no such opportunities for staff teachers or others. The total staff saw various IGE films once or twice, but several staff teachers indicated that the IGE films were repetitious and unrealistic. The staff was provided the booklets, but used them minimally. A 1-day session served as an overview; a few teachers attended a reading workshop (Ironside, 1972, pp. 175-176).

After these initial training sessions, however, school personnel had virtually no contact with other persons, schools, agencies, or materials related to MUSE/IPM. A number of resources came from the state coordinator, but since no IGE subject was operative, these were stored away for future perusal by the staff. The state office provided a detailed guide, but it was used minimally. Inservice training was limited to what might occur during unit meetings or came to a standstill; the use of booklets and filmstrips in and by the "units" virtually ceased (Ironside, 1972, p. 177; Ironside, 1973, p. 28). Based on

[5] The same study mentioned in footnotes 2 and 3 found that nearly one-quarter of the schools (24% of 159) that called themselves IGE were reorganizing their staffs by forming units, sharing decision making, and making efforts to change the pattern of instruction in their schools (Romberg, 1985, p. 72).

several sources (Barrows, Klenke, & Heffernan, 1979; Ironside & Conaway, 1979; Goodridge, 1975; Lacy, 1972), it was estimated that this group of nominal IGE schools accounted for about 60% of 200 schools.

The principal, unit leaders, and a few teachers of a low marginal IGE school went to a state-sponsored training for principals and unit leaders in 1971. The staff was exposed to IGE filmstrips and books, followed by a local commitment meeting held for the staff. They later held a Preschool Workshop for three days usually in August 1971 (Ironside, 1972, p. 189). However, there was little or no school-wide inservice training after the Preschool Workshop, and virtually no use of consultants. The principal, unit leaders, and a few teachers attended League training activities. The principal made one visit to other MUSE/IPM schools but staff made no such visits. The principal had no direct contacts to the state coordinator for assistance of any kind, though the coordinator made two or three general visits to the school (Ironside, 1972, p. 191).

A high marginal IGE school was active in the state League of schools. The principal and unit leaders attended several League training functions during the year of 1971-72, and reported back to the staff that these were valuable sessions (Ironside, 1972, p. 159). High marginal IGE schools called on some of external resources: state coordinator, district liaison, the IGE printed materials, visiting consultants, staff of other schools, district reading consultant, and the League. In addition, the principal and unit leaders attended a R&D Center-sponsored mid-year training workshop (Ironside, 1972, p. 159). Unit leaders and a few teachers made scheduled visits to other MUSE/IPM schools in the vicinity (Ironside, 1972, p. 160). Nevertheless, the great share of the MUSE/IPM preparation and training was directed to the principal and unit leaders in high marginal

IGE schools; except for what unit leaders might pass on, staff teachers were given much less opportunity to talk, study, improve skills, and so on (Ironside, 1972, p. 160). Based on several sources (Barrows, Klenke, & Heffernan, 1979; Ironside & Conaway, 1979; Goodridge, 1975; Lacy, 1972), it was estimated that this group of marginal (both low and high) IGE schools accounted for about 20% of 200 schools.

The principal and unit leaders of a true IGE school attended a state-sponsored staff development workshop in 1971. The staff participated in 1-day local commitment/ awareness session. The total staff attended Preschool Workshop held for two days in September 1971 (Ironside, 1972, p. 196). After initial training, the principal called on state coordinator for training materials and assistance with IGE subject. Visits to other MUSE/IPM schools were made in fall 1971. The principal attended League training sessions and school personnel attended workshops sponsored by the R&D Center. The principal, unit leaders, special teachers, and reading teachers attended an R&D Center-sponsored 1-week unit leader training workshop and reading teachers attended R&D reading workshop in which mutual support sessions with staffs of one or two other MUSE/IPM schools were also held (Ironide, 1972, p. 198).

Also, school-wide inservice took place several times in a true IGE school, in one case two days, another for one day, several for an hour or two. Unit inservice was not the rule, though: a few units held one hour inservice sessions for whole year; one unit held sessions for two and a half hours; and a few units held none (Ironside, 1972, pp. 198-199). Based on several sources (Barrows, Klenke, & Heffernan, 1979; Ironside & Conaway, 1979; Goodridge, 1975; Lacy, 1972), it was estimated that this group of true IGE schools accounted for about 20% of 200 schools.

Role Relationship Change. In nominal IGE schools, there was evidence that principals, unit leaders, and teachers did not share common understandings and expectations regarding their role relationships and responsibilities. Thus, there were differences in perceptions regarding role behaviors expected of each participant. The past expectations of the participants' roles and responsibilities that were deeply ingrained in the established institutional practices, did not easily change in a short time period without a fundamental transformation in the grammar of schooling.

In marginal IGE schools, school personnel understood the roles expected of each occupant, but they did not overcome not only the conflict between the old and new role relationships and responsibilities within an individual, but also tensions between role occupants among unit members as well as among the whole personnel as a group. An incongruence between the role expectations and need-dispositions of school personnel caused conflicts among the staff that manifested themselves in the form of problems of interpersonal communication, agreement on philosophies and teaching methodologies, and clarification of roles and responsibilities (Heffernan, 1976, p. 130).

With shared understandings of role relationships and expectations among themselves, school personnel of true IGE schools overcame not only the conflict between the old and new role relationships and responsibilities within an individual, but also tensions between the principal and unit leaders as well as among unit members. Whenever there was an interpersonal conflict, they solved these conflicts through constructive discussions during formal unit meetings and informal encounters.

School District Support. With regard to nominal IGE schools, some districts did not fulfill their commitment to assist schools in implementing IGE and withdrew district

financial support (Gaddis, 1977, pp. 188-198). Due to this withdrawal of financial support, the aides were cut back or they were completely eliminated from schools, or the student-teacher program was dropped; thus, teachers had a hard time grouping and there was no clerical help for record keeping (Gaddis, 1977, p. 192). In addition, the district turned down teachers' request for unit leaders' extra pay; then the school dropped IGE (Gaddis, 1977, p. 193).

In some school districts, rivalry over district funds existed between IGE and non-IGE schools. The non-IGE schools felt they were being slighted because the IGE schools were getting additional things; thus, there was pressure on districts from non-IGE schools to drop the program. In order to avoid the rivalry issue, districts simply withdrew their commitment to support IGE (Gaddis, 1977, p. 193). In another case, the former superintendent was very pro-IGE and encouraged schools to go IGE; however, a new superintendent came in with a different philosophy and discontinued the program (Gaddis, 1977, p. 195). Also, the community contributed to the failure of IGE by not supporting increases in local school taxes to support the innovation (Gaddis, 1977, p. 194).

In the case of marginal IGE schools, the superintendent, and particularly the board of education, were supportive and helpful; this support included considerable expenditure for materials, travel, and summer workshops (Ironside, 1972, p. 175). At the district level, a local liaison was appointed early, and this person along with the superintendent attended all meetings of the formal training chain except a "national awareness" session. A district reading consultant was assigned to serve MUSE/IPM schools (Ironside, 1972, p. 153). The district liaison helped the school with a plan on developing and

implementing an IGE curriculum: how best to use aides, what supplemental materials to have available, and how to keep records (Ironside, 1972, p. 159).

The school district supported a true IGE school in different ways. For example, the District had definite inservice schedule, and devoted summer work to development of objectives and outlines in reading and math. Also the district had strong curriculum committee, which served the district policy function regarding MUSE/IPM in the school (Ironside, 1972, p. 195).

The Phase of Institutionalization

By the time of institutionalization phase, most nominal and marginal schools either discontinued the IGE program or remained traditional schools with scattered vestiges of IGE, while most true IGE schools continued into the institutionalization phase. In the history of IGE, three major factors facilitated the institutionalization of MUSE/IPM: external support, continued inservice for the staff, and creative modification of the IGE program.

External Support. A successful IGE school in the phase of institutionalization received continued financial, technical, and/or moral support from such agencies as the state department of education, regional education agencies, teacher education institutions, Leagues, the school district, and parents. One true IGE school pursued individualization through the implementation of IGE because of a mandate by the State Department of Education and the district's philosophy encouraging individualization (Klenke, 1975, pp. 91-92). In another true IGE school, a small group of parents was involved in selecting IGE for adoption, and its implementation and continuation. Also, teacher education institutions not only offered summer workshops for staff members to attend, but also sent

their student teachers to be involved in IGE schools. At the district level, the superintendent or assistant superintendent of the district worked with interested persons from other districts to establish a Hub for the IGE schools, while the board of education granted permission to implement the innovation for a certain period.

Continued Inservice. The principal of a successful IGE school in the phase of institutionalization not only participated in training programs such as a principal-unit leader workshop, but also helped the staff attend several inservice training sessions including district training programs and weekly inservice for the staff. The principal often played an important role in supporting staff development for new members because of turnover in the original cadre of project teachers. These successful IGE schools occasionally brought in outside speakers for workshops which were open to all IGE schools in the area. Thanks to these training opportunities, a few of the successful IGE teachers grew to conduct a workshop for the district, e.g., district's substitute teachers, and serve as consultants for schools in other districts (Melvin, 1976).

Creative Modification. Given the fundamental change that IGE requested of a school in conjunction with school organization and instructional patterns and local constraints that hindered a complete institutionalization of MUSE/IPM, a number of successful IGE schools creatively modified the prototypic model of IGE in line with their local circumstances, such as district requirements, parental expectations, teaching philosophy, and student needs.

At one true IGE school, local constraints were preventing the school from developing a differentiated staff, a component of MUSE (Klenke, 1975, p. 95). Another true IGE school organized each team to include students at a single grade level. At still

another school, one team incorporated "very little" multi-age grouping of students. The homeroom groups, there, were by grade level; and instructional groups were formed by ability levels within grade levels (Klenke, 1975, p. 106).

At another school, in relation to IPM, general school-wide objectives, as defined in Step 1 of the IPM, had not been identified (Melvin, 1976, p. 188). No effort was made by the staff to specify school-wide objectives. However, the implementation of Steps 2 through 7 of instructional programming followed the model closely when the teams used the WDRSD materials and the suggested guidelines for implementation (Melvin, 1976, p. 173).

The Contents of Change

Shared Decision-Making

The membership, modes of operation, and functions performed by the IIC were substantially different from the prototypic multi-unit organization model and varied from school to school during the periods of implementation and continuation, 1971-1979. Although IGE schools were moving toward decentralization of authority, the principal was still the major decision maker in most of the managerial and curricular domains, and a unilateral decision-making style was predominant over consensual or delegating styles, leaving unit leaders and teachers feeling a lack of involvement in decision-making during the phases of implementation and continuation. Thus, the IGE goal of sharing decision making was only moderately achieved, falling far short of the standards that the designers of the prototypic multi-unit model set forth.

The principal and unit leaders were not experts at IGE. Thus, they brought different opinions to the IIC meetings. Everybody brought a different awareness of the

program, and these couldn't be brought together unless the leadership had a clear idea to bring them together. Sometimes, when the unit leaders had an agreement, the principal disagreed. These differences led to confusion among IIC members and often made members feel that the new system was less effective/efficient. When they did not reach an agreement, then it was difficult to put any parts of IGE into practice. These confusions led many principals back to the previous power distribution. These IGE principals did not give up their authority, as revealed in several studies (Black, 1976; Gramenz, 1974; Ironside, 1973; Moyle, 1977; Nerlinger, 1975; Richardson, 1972). Pressure from internal and external sources could easily sway the decision to continue or drop a program, particularly if it caused a conflict in the principal's educational philosophy. Thus, it was more likely that IGE continued when there was a match between the IGE program and the principal's educational philosophy and skills (Gaddis, 1977, p. 198).

In nominal IGE schools where neither of the authority transfers – from the principal to unit and from individual teachers to units – took place, the principal dominated IIC meetings, remained the major decision maker on both managerial and technical matters, provided little opportunity for distribution of decision-making, and handed out meeting agendas that were more like notes and announcements (Ironside, 1973, pp. 28-29). Unit leaders of these nominal schools were not committed to the concept of IGE and did not adequately prepare to discuss and defend in the IIC issues of concern to their unit members (Moyle, 1977, p. 222). The teachers in those schools did not perceive a reduction of centralization during the period of implementation and perceived themselves to have no involvement in making potent decisions of school-wide scope (Felker, 1980; Wright, 1976).

The lack of shared decision-making as well as lack of changes in role expectations and relationships was highly correlated with the lack of staff commitment. After schools had been in the program for a period of time, teacher commitment began to drop off (Gaddis, 1977). A number of the staff members left the school because they couldn't cope with the demands of the program. Some teaches felt that it was too much trouble to shift students; thus they went back to self-contained classrooms. Consequently, unit teachers showed much resistance to teamwork, were not committed to planning together, held on to their own students, and taught single-aged students in self-contained classroom (Ironside, 1973, pp. 28-29).

The principal of a marginal IGE school continued to take initiative in the meetings and announce what amounted to his/her decisions on many matters. As the implementation progressed, however, unit leaders grew to know how function in the IIC and became satisfied with their new roles. When unit leaders pressed the principal for needed decisions to make MUSE/IPM work, the principal responded by gradually transferring some of his/her authority to unit leaders, having them more involved in decisions on school and unit operations. However, unit teachers had difficulty in turning over their authority to the units in part because they suffered interpersonal conflicts among themselves and in part because they lost the sense of owning students and the rewards from getting close to them, and the feelings of responsibility for classroom events.

In true IGE schools, both the principal and unit teachers turned over his/her authority to the units. The principal shared his/her authority and power to make decisions with unit leaders; thus the IIC meetings were characterized by effective leadership by the

principal, give-and-take, productive use of time, participation by all. In these schools, the decision-making was characterized more by consensus, participatory and delegating styles than unilateral one[6] (Ironside, 1972, p. 210).

With shared decision-making as well as shared role expectations, units of a true IGE school moved smoothly through planning, scheduling, teaching assignments, parent communications, and so on. They shared children, rooms, resources, teaching skills; and teams of teachers and aides worked together with varied groups of students often in an open space area. The units had good leadership and open communication, and the meetings were productive. All units worked out "team groundrules" (Ironside, 1972, p. 196). In doing so, they moved from a self-contained classroom to a team-oriented unit.

However, even true IGE schools could not reach a point where they completely solved inter-unit communications or school-wide coordination problems. Given the demands for maintaining rationalized practices to handle a batch of students, it was a fundamental transformation for them to cooperate between units and achieve school-wide coordination that proved practically impossible.

In sum, although IGE emphasized cooperative decision-making, the power relations in many IGE schools did not always promote cooperative decision making and action. In other words, while the IGE model emphasized cooperation, consensus and joint decision making, the actual issues seemed to come down to power: the power of the administration to influence teaching and managing strategies; the power of one member

[6] Delegated decision making refers to decision making within the Instructional Improvement Committee (IIC) and implies that an IIC member (or members) other than the principal was given responsibility for the final decision; participatory decision making refers to the IIC and implies that each member has a voice in the decision process; unilateral decision making refers to the principal, the chairman of the IIC, making the final decision although the other members may have had input; and consensus refers to general or unanimous agreement within the IIC (Loose, 1973, p. 11).

of a unit to impose his/her will on the others; and ultimately the power of the teachers to restrict the freedom of the students (Pettit, 1980, p. 249).

Team Teaching

Ironside (1972) found that teamwork was a "problem-area" for teachers during the initial nationwide IGE implementation. Teamwork and unit communication (working, planning, teaching together) comprised a major concern expressed by teachers, and at the same time it was an area frequently indicated as being the most rewarding. Many principals, too, noted unit teamwork as a valued goal accomplished in the first year. The irony was that at the end of the year, 50% of the 700 teachers polled indicated their preference for "doing things as a unit" half the time or less. There might have been satisfaction, but teamwork apparently had only a part-time appeal (Ironside, 1972).

For many unit teachers in four (marginal) IGE schools of Wisconsin in 1972 (Packard, 1973), collaboration was associated with personal cost as well as personal gain. Unit teachers collaborated in curriculum development efforts and in preparing new lessons for the unit but did not freely part with personal, independently developed lessons (Packard, 1973, p. 116). While most units had a history free from severe internal rupture and exhibited close interpersonal involvements and relatively intense work relations, some units suffered internal strife. The root issue concerning interpersonal problems seemed to be the degree to which unit decisions bound individual members or subgroups to definite behaviors and approaches, which in turn affected the extent to which unit teachers turn over their authority to the unit. In silent testimony to the growth and course of interpersonal relations among unit members were the "moving desks." When there was rancor, the desks separated, each retreating to a remote corner. When promise continued

to grow, the cluster of furniture moved intact to the periphery of the instructional area (Packard, 1973, p. 115).

In Packard's four multi-unit schools of Wisconsin where teachers were expected to share equipment, materials, lessons, space, and children with other unit members, teaches seemed to lack fulfillment and lose pride in ownership of, as well as feelings of responsibility for, classroom events. Since students moved among teachers for classes, the sense of owning children and the rewards from getting close to them seemed diminished. On the other hand, ownership of objects and areas was maintained (Packard, 1973). Drifting away from normal to somewhat novel means of fulfillment was sometimes resisted by teachers as well as cause for parents and others to discredit the team approach (Packard, 1973, p. 116).

In two (true) IGE schools studied by Klenke (1975), the efficient use and sharing of human and material resources through the team's planning efforts was the major advantage identified by unit leaders and teachers (Klenke, 1975, p. 163). Also, because teaming resulted in more than one teacher working with each student, unit leaders indicated that this prevented one teacher from having the ability to assign an academic or social "label" to a student (Klenke, 1975, pp. 163-164). In contrast, disadvantages associated with teaming focused upon the loss of teacher independence, the additional work load, and the danger of interpersonal conflict among staff members (Klenke, 1975, p. 164).

Unit teachers in Wisconsin's Harper School felt very strongly the support of their fellow teachers. They thought that IGE provided a framework for them to break out of the isolation of the traditional classroom and become involved in professional discussion

with other adults and to receive encouragement and praise. They also enjoyed their role in decision-making, especially their ability to directly influence the operation of the school. While the unit had autonomy in matters such as spending their budget money, it could also participate in overall planning, so that teachers felt involved in the whole, a feeling which strengthened their commitment (Pettit, 1980, pp. 253-254).

The negative perceptions of Harper teachers revolved around two issues: time and class size. IGE seemed to involve far more activity outside the classroom than the traditional system, and these teachers seemed to resent some of the time spent on things like meetings and memos, especially when the results were not directly applicable to the children. Related to this resentment was the consistent feeling that the pace was too quick and that too much effort was being expended for the amount of benefit gained (Pettit, 1980, p. 254). Finally, the Harper teachers felt the contradiction between their wish to be more personal and spend more time with individual students, and the need to have their classes organized into smoothly functioning groups to maintain order (Pettit, 1980, pp. 254-255).

As the Wisconsin Center did not provide enough training opportunities for IGE practitioners to develop specific skills related to shared decision-making, it did not help staff teachers develop skills (e.g., group dynamics skills) to work cooperatively with other team members, and solve interpersonal conflicts. Further, since many of the interpersonal problems were related to educational philosophies and personal traits, participation in a few workshops could not solve the problems. Some teachers who could not cooperate with other teachers or did not agree with the IGE philosophy were allowed to transfer, but others could not find a place to go. An even more serious problem than

interpersonal tensions was standardization of rules and decisions by unit teachers. This standardization is recognized as a dramatic paradox of the IGE movement that promoted quality education by providing for individual differences.

Standardization. Packard (1973) found that in an IGE school all units employed the same report cards, lunch schedule, book lists, meeting routines, class schedules and so on. Clearly, administrative problems were lessened and economies of scale were preserved when all units followed the same procedures. Naturally, the innovation embodied a new set of standard procedures which applied equally to all units (Packard, 1973). In schools as elsewhere, service to clients was equated with following the proper procedure. For schools in transition, agreement about what were safe procedures was shaken until or unless criticism was felt and acted upon. Standardization was at least an adaptation if not a solution to, perhaps, the most severe implementation problem these schools faced; i.e., fickle, unremitting, and intense task environment criticisms (Packard, 1973, p. 118).

The team structure at Meadow School (Gitlin, 1980) constrained teachers' work in two basic ways. First, teachers within a team were encouraged to take one standardized position on many curricular decisions and behavioral rules. Second, the team structure made it necessary to specify the time a lesson or topic would take. This not only limited teachers' ability to meet student needs or even complete a lesson but also acted to structure the teachers' day so that it was difficult to incorporate new activities into the specified schedule. By having these time constraints and standardization of rules and decisions, individual teachers were limited in the scope and execution of curricular ideals as well as the way they could approach student behavior (Gitlin, 1980, p. 158).

Multi-aging

Especially, multi-aging or non-gradeness was the most difficult to achieve among the elements of IGE in all IGE schools because of district requirements with respect to "district reports, tests, and grade level objectives" and community norms that required a comparison of student growth with grade level norms.

For example, a teacher at Rocky Mountain said that both parents and county did not want to give up gradedness. The county required reports to be submitted with grades, and parents wanted reports in a graded fashion (Klenke, 1975, p. 108). One parent observed that this non-gradedness may be emphasized but not carried out at Rocky Mountain. Another felt that a lot of parents want to know what grade their children are in (Klenke, 1975, p. 108). At another school called Scott, despite all effort to deemphasize references to grades and grade levels with staff, children, and parents, it appeared that the notion of gradedness still existed. "Kids still know" was the reaction expressed by many staff members. Several incidents were reported that illustrated the possible reasons for the difficulty in eliminating this and the efforts the staff had made toward reaching a non-graded environment. District requirements seemed to present many of the difficulties in achieving non-gradedness. A teacher outlined these as "district reports, tests, and grade level objectives." There was still a tendency, even though continuous progress was built into the instructional program, for parents to think of progress in terms of grade level promotion or demotion.

Further, it was found that the central office personnel did not abolish the traditional grade level arrangement for curriculum and other records for students. In order to achieve the goals for IGE, a comprehensive measure to overhaul district regulations

regarding graded curriculum and record-keeping was required. However, the school districts seldom changed any rules or regulations for IGE schools; instead, they insisted on maintaining existing district legal and administrative framework on curriculum and record-keeping. Also, the IGE dissemination/implementation plan did not include a legal mandate to have local school districts as well as state education agencies change their legal and administrative frameworks in tune with the IGE system. This is recognized as another weakness of the IGE Change Model.

Instructional Programming Model

In combination with the multi-unit structure, the Instructional Programming Model (IPM) was created to provide effectively for differences among students in rate of learning, learning style, and other characteristics in all curricular areas (Klausmeier, 1972b, p. 48). Contrary to the expectations of the developers of IGE, however, in many schools not only the classic instructional programming model was altered, reduced in some way, but also the pattern of IPM was different within and across units, for example, using the full IPM for some students but not others and stressing some steps in one curriculum but not others (Ironside & Conaway, 1985, p. 127). Moreover, in combination with the unit structure where instructional procedures were standardized under the team teaching approach, patterns of instructional programming in word attack, comprehension, and mathematics reflected common objectives, a common level of achievement, and a common basic sequence with some variation for individual students (Melvin, 1976).
In short, although the instructional programming model, along with the team teaching approach, was designed theoretically to permit students to individually advance at their

own rates, the reality of the grammar of schooling basically prevented students from having a variety of meaningful learning experiences in many IGE schools.

DISCUSSION

The IGE system directly challenged the established institutional practices by aiming at replacing age-graded, self-contained classrooms – a change not easily acceptable for many practitioners who were trained for and used to the established organizational forms. Tyack and Cuban (1995) maintain that teachers as well as the general public are accustomed to elementary schools that are divided into self-contained classrooms called "grades." Under these institutional arrangements, teachers are expected to monitor and control students, assign tasks, and ensure that work has been accomplished. Teachers and students socialized to such routines often find it difficult to adapt to different structures and rules. Over time, such established institutional forms come to be understood by educators, students, and the public as necessary features of a "real school" (Tyack and Cuban, 1995, pp. 85-86).

The above notion was supported by a perspective on school organization that assumes that rationalized activities are necessary for school-system functioning for two reasons: (1) the school system is responsible for a uniform product of a certain quality; (2) socializing children and adolescents for adult roles is massive and complex work (Bidwell, 1965, p. 974). Demands for uniformity of product and the long time span over which cohorts of students are trained press for rationalization of activities and thus for a bureaucratic basis of organization (Bidwell, 1965, pp. 976-977). At the same time, the typical educational technology requires persistent interaction between an individual teacher and his/her students (Bidwell, 1965, p. 975). Given this aspect of the educational

technology, the division of labor in school systems is both temporal and functional. Over time the activities are divided into the school year or the semester. The temporal division of labor is tied to age-grade placement of students categorized into school grades or classes, which correspond to each age-grade represented in the student body. This close correspondence of school grades and age-grades arises as school systems become routinized, so that students must be moved through the system in batches and cannot be assigned to school grades individually on the basis of achievement (Bidwell, 1965, p. 975).

The very age-graded, self-contained classroom that the IGE developers wanted to replace was itself the result of previous reformers impressed with the division of labor and hierarchical supervision common in factories, prominent among them city and state superintendents and school board leaders. This age-graded, self-contained classroom was created by educational reformers seeking educational bureaucracy in the 1840s. Regarding the objective and efficient classification, or "grading," of pupils, as crucial to educational bureaucracy, from Horace Mann in Massachusetts to Calvin Stowe in Ohio to John Pierce in Michigan, leading common school crusaders urged communities to replace the heterogeneous grouping of students with a systematic plan of gradation based on the Prussian model. Knowing that educational function necessarily reflected architectural form, John Philbrick actually provided a concrete model for his urban colleagues. He convinced the Boston school board that the proper classification of pupils required a new kind of building – one which has since been dubbed the "egg-crate school." In 1848, the new Quincy School was dedicated and Philbrick became its principal (Tyack, 1974).

When the U.S. Commissioner of Education surveyed practices in forty-five cities

in 1870, already the pattern of eight years of elementary school had become the norm (although there was considerable variety in the division of schools into primary and grammar categories). A nineteenth-century student of the grading of schools observed that "by 1860 the schools of most of the cities and large towns were graded. By 1870 the pendulum had swung from no system to nothing but the system." From 1910 to 1930 to 1960, the number of one-room (non-graded) schools declined from approximately 200,000 to 130,000 and finally to 20,000 (Tyack, 1974, p. 25).

In addition to its claims of pedagogical efficiency, the graded school had the virtue of being easily reproduced as the population of children mushroomed in cities, no small consideration in the chronically overcrowded urban systems. It mirrored as well the hierarchical, differentiated organizations in which urban dwellers increasingly conducted their business, both public and private. Despite criticisms both inside and outside the educational profession and several experimentations with alternatives to the year-by-year system of grading, the graded school became firmly ensconced as part of the grammar of schooling, for it seemed to solve key organizational problems (Tyack & Cuban, 1995, pp. 89-91).

The notion of the grammar of schooling helps to explain that the characteristics of 20th century public school organization did not lend themselves to the IGE system. Most U.S. public schools, it seems, could not reform themselves beyond the limits of the established nature of a "real school" (Tyack & Cuban, 1995). Given the strong hold of the established institutional forms on teachers as well as the general public, it is not surprising that the three major elements of IGE – sharing decisions, teaching in teams, and non-gradedness – were difficult to implement, while the Instructional Programming

Model was not conducive to providing for diverse learning opportunities for individual students.

In addition, as Cuban (1993) maintains, over the past century, teachers were gatekeepers for any pedagogical reforms, choosing what they would do in their classrooms once they closed the door (p. 261). The margin of freedom that teachers enjoy within a context of situationally constrained choice, he continues, may be small, but it is significant, as the historical evidence has demonstrated. That margin can expand or shrink, depending on whether administrators and policymakers see as their task the cultivation or repression of teachers' capacities to lead both inside and outside the classroom (Ibid., p. 283). This was exemplified by the varying relationships between the administrators and practitioners in different types of IGE schools. Another of Cuban's implications for teachers is that teacher action at the school and district levels to lighten or remove organizational constraints can expand their autonomy within the classroom, creating even more opportunities for change (Ibid., p. 284), as evidenced in some successful IGE schools.

Snyder, Bolin, and Zumwalt (1992) maintain that successful implementation of school reform efforts demands the understanding and acceptance of the subjective realities of the players undergoing the change process, because change is not merely observable alterations in behavior, but rather a personal development process both for the teacher and student. For example, the Denver Curriculum Project, they contend, suggests that when the outside influences are perceived and used as attempts to provide teachers with tools to collaboratively develop their skills, knowledge, and attitudes in context-

specific environments, they have positive effects for teacher development, enriched curricular experiences, and student outcomes (Snyder et al., 1992, p. 427).

MAJOR IMPLICATIONS

Educational reform, especially a fundamental reform, is rarely implemented as it was intended. As the Popkewitz et al.'s (1982) IGE study shows, professional interests, social and cultural orientations, and the wider transformations that take place in society at large do not allow for educational reform as planned. In Cuban's terms (1993), cultural beliefs about the nature of knowledge, the mechanism to socialize and sort students into varied socioeconomic positions, the role of policymakers, the organizational structure of the district, school and classroom within which individual teacher's knowledge and beliefs are shaped, and the cultures of teaching, itself, all combine in shaping a durable, practical pedagogy. Tyack and Cuban (1995) described this as the grammar of schooling. The hold of traditional forms and practices on teachers and students is strong, often with good reason, and the public tends to share traditional cultural beliefs about what constitutes a "real school." This institutional culture probably has more influence on the implementation of policy than policy has on institutional practices (Tyack & Cuban, 1995, p. 134).

The second implication, derived from the first, is that reformers need to expect that any original plan will be interpreted, modified, and used in accordance with the professional cultures and ideologies which are present within and asserted through institutions, as well as in response to local conditions outside of those institutions. In this regard, advocates of the current nation-wide standards-based curriculum reform movement need to expect a variety of hybrids reflecting different local circumstances.

Reformers must expect not only a hybridizing of their models of educational reform, they must also give due weight to teachers' first-hand perspectives on schools and their responsibilities for carrying out official policies. Educational change will likely come from internal changes created by the knowledge, expertise, ideas and values of teachers (Snyder et al., 1992, p. 429). While teachers may use externally designed curriculum and benefit from the stimulation of an "outsider," it is they and their students who create the enacted curriculum and give meaning to it, for they are primarily creators rather than receivers of curriculum knowledge (Snyder et al., 1992, p. 429). At the same time, because most educational reforms make increased demands upon the teacher's limited time and energy, help from outside the classroom is essential in implementing any planned alteration in basic classroom practices (Cuban, 1993, p. 281).

Third, in order to increase the possibility of institutionalizing a large reform program like IGE, the following implications on change process in each phase of innovation are drawn. First, during the phase of mobilization, staff teachers need to be involved in decision making on the adoption of an innovation; administrators need to see if the staff teachers desire or welcome change; change agents need to see if the staff teachers are ready to embark on a reform program; and change agents need to arrange for adequate facilities, materials, and financial assistance as necessary. Second, during the phase of implementation, school district personnel and the principal need to provide ample opportunities for the staff to attend training programs; the principal and the staff need to spend enough time and energy to change their role relationships and expectations in tune with the new program; and the school district needs to provide continued support for staff development, financial aid, and materials. Third, during the phase of

institutionalization, continued external support should be provided for school professionals with respect to budget, personnel, service, facility, and materials support; new as well as veteran school personnel need to participate in continued inservice sessions for the program, not only to catch up with but also to refine and renew the program in tune with the local school setting; and staff teachers need to be allowed to modify as necessary the original prototypic model of the reform program in tune with the local circumstances.

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